Effectiveness of Demonstration Method on Knowledge Regarding Paediatric Advanced Life Support Among GNM Final Year Students Studying in Selected School of Nursing Bagalkot

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Abstract:- Pediatric Advanced Cardiac Life Support is an extension of PBCLS, often starts with analyzing patient rhythms with a manual defibrillator. In contrast to an AED in BLS where the machine decides when and how to shock a patient. The advanced cardiac life support team leader make those decision based on rhythm on the monitor and patient vital signs. The next steps of pediatric advanced life support are insertion of IV lines and placement of various air way devices. communally used advanced cardiac life support drugs such as epinephrine and atropine are then administered, at this time the advanced cardiac life support personal quickly search for possible causes of cardiac arrest or pulmonary arrest based on their diagnosis more specific treatment are given in the present world the advanced cardiac life support is very essential for every health professional upcoming world.

Objectives: (1) To assess the knowledge regarding pediatric advance life support among GNM Final year students.(2) To evaluate the effectiveness of demonstration method on knowledge regarding pediatric advance life support among GNM Final year students.(3) To find out the association between post test knowledge scores regarding pediatric advance life support with their selected socio demographic variables.

Materials and Methods: Research design for the present study is pre-experimental, i.e. one group pre-test post test design was adopted for the present study. The sample includes 50 GNM final year students from selected nursing schools of Bagalkot District. The sampling technique adopted for the study is Simple random sampling by using lottery method. Data collected by using structured knowledge questionnaires & analyzed using descriptive and inferential statistics.

Results: After collection, the data are organized and analyzed with the help of mean, median and standard deviation, The mean percentage of knowledge scores of the GNM final year students in the pre-test was 62.94% with mean and SD (22.66±3.85), whereas the mean percentage of knowledge scores in post-test was 89% with mean and SD (32.04±3.23). The paired ' t' test value (37.6537) showed the significant difference in the knowledge level of GNM final year students regarding Pediatric advance life support after the administration of Demonstration method. Findings of the study revealed that there was no significant association found between post-test knowledge scores of the GNM final year students with selected socio-demographic variables.

Conclusion: After thorough analysis of the data, researcher concluded that a significant difference was found between the pre-test and post-test knowledge scores of GNM final year students. The study showed that demonstration method was effective and improved the knowledge of GNM final year students on Pediatric advance life support.

Keywords:- Basic Life Support (BLS), Pediatric Basic Cardiac Life Support (PBCLS), Automated External Defibrillator(AED),Cardiopulmonary Resuscitation (CPR), Pediatric Advance Life Support (PALS), Advanced Cardiovascular Life Support(ACLS).

I. INTRODUCTION

Pediatric Advanced Life Support refers to the assessment and support of pulmonary and circulatory function in the period before an arrest and during and after an arrest. Consistent with the Chain of Survival PALS should focus on prevention of the causes of arrest (Sudden

Infant Death Syndrome, injury, and choking) and on early detection and rapid treatment of cardiopulmonary compromise and arrest in the critically ill or injured child.[1]

II. NEED FOR THE STUDY

Every year Out of this 2 million are children dying due to airway obstruction, choking, cardiac problems, and electric shock. About every 29 seconds a new case is reporting in the globe. Around 20,000 new heart patients develop everyday in India, six crore Indians suffer from heart disease and 30 percent more are at high risk. By 2020, India will have the largest coronary heart disease (CAD) burden in the world and will account for one third of all deaths; many of them will be adolescents. About 75 percent to 80 percent of all out-of-hospital pediatrics emergencies happen at home. Hence, being trained to perform basic life support (BLS) can make the difference between life and death for a victim.[2]

In children, cardiac arrest is mostly the terminal event of progressive shock or respiratory failure. Primary cardiac arrest is less common in infants and children than adults but may occasionally in conditions like SIDS {Sudden Infant Death Syndrome}, drowning trauma and sepsis.[3]

A quasi-experimental study was conducted to assess the effectiveness of hands-on skill training programme on CPR among adolescents in selected schools in Bangalore. The study was carried out in Anupama high school,Kurubarahalli, Bangalore. 30 adolescents were selected by simple random sampling technique; structured questionnaire and observations checklist was used to collect the data. data was analyzed by using descriptive and inferential statistics. Effectiveness of the hands on skill training was tested by inferential statistics using paired't' test. A high significant difference was found between the pre- and post-test knowledge scores about 15.40 and the pre and post test skill difference was 12.80. The study concluded that hands on skill training was effective improving the level of knowledge adolescents.[4]

The nurse who is trained in pediatric advanced cardiac life support skills, will possess qualities such as goal oriented, self-directed, a capacity to work independently, able to identify and set priorities, assertive with positive attitude and able to work well with the professional staff.

Objectives of the study:
1) To assess the knowledge regarding pediatric advance life support among GNM Final year students.
2) To evaluate the effectiveness of demonstration method on knowledge regarding paediatric advance life support among GNM Final year students.
3) To find out the association between post test knowledge scores regarding paediatric advance life support with their selected socio demographic variables.

III. MATERIAL AND METHODS

The present is pre-experimental, i.e. one group pre-test post test design was adopted for the present study. The sample includes 50 GNM final year students from selected nursing schools of Bagalkot District. The sampling technique adopted for the study is Simple random sampling by using lottery method. Data collected by using structured knowledge questionnaires & analyzed using descriptive and inferential statistics.

IV. RESULTS

Section I: Description of socio-demographic characteristics of GNM final year students

Percentage wise distribution of GNM final year students showed majority (76%) of the GNM final year students were between 21-22 age group and 24% of GNM final year students were above the age group of 23 age .

Percentage wise distribution of GNM final year students showed according to their gender depicts majority of (64%) of samples were female and 36% of them were males.

Percentage wise distribution of GNM final year students according to their religion, data revealed that, Majority of GNM final year students (64%) were belonging to Hindu religion, 24% of them were Muslim and 12% of them were belonging to Christian religion.

Percentage wise distribution of GNM final year students according to their type of family, data revealed that majority (72%) of GNM final year students are belongs to nuclear family and 28% of students belongs to joint family and there is no extended family.

Percentage wise distribution of GNM final year students according to their religion ,data revealed that ,Majority of GNM final year students (44%) had belonging to 5001-10000 income , 24% of them were below 5000 income , 22% of them had belonging to 10001-15000 income and only 10% of them belongs to 15001 above income.

Percentage wise distribution of GNM final year students according to their percentage secured in previous year depicts that majority (30%) of the GNM final year students were secured 70.01-80%, where as 17% students got 60.01-70% of marks, 3% of the students were obtained 80% and above, and there was no any students secured less than 60%.

Percentage wise distribution of GNM final year students samples according to their attainment or previous exposed to education training programme on PALS data depicts majority(76%)of GNM final year students had not attended any of programs on pediatric advance life support and 24% of GNM final year students had attended program on pediatric advance life support .

Section III: Assessment of pre-test knowledge of the GNM final year students regarding pediatric advance life support.

Categorization of the GNM final year students on the basis of the level of knowledge was done as follows: scores 0-7Very poor knowledge level, 8-14 Poor knowledge level, 15-21 Average knowledge level,22-28 Good knowledge level and 29-36 Very good knowledge level.

Section IV: Area- wise effectiveness of the demonstration on Pediatric advance life support

A finding regarding comparison of mean percentage of the knowledge scores of the pre-test and post-test data reveals an increase of 26.94 percent in the mean knowledge score of the GNM final year students after STP. Comparison of area wise mean and SD of the knowledge scores in the area of ' Meaning and concept about PALS' shows that the pre-test mean percentage of knowledge score was 78.5 percent with mean and SD 3.14 ± 0.7. Whereas post-test mean percentage of knowledge scores was 96.5 percent with mean and SD 3.86 ± 0.45. This shows an increase of 18 percent with mean and SD about 0.72 ± 0.25.

Section V: Association between the post-test knowledge scores of GNM final year students regarding Pediatric advance life support and selected socio - demographic variables.

Area wise difference between pre-test and post-test knowledge scores on Pediatric advance life support was highly significant. Mean of post-test knowledge scores in the area 'Meaning and concept about PALS' (3.86 ± 0.45) is significantly higher than the mean of pre-test knowledge scores (3.14 ± 0.70) at 0.05 level of significance (t=8.471, p<0.05). Mean of post-test knowledge scores in the area 'Recognition and diagnosis' (6.14 ± 0.9) is significantly higher than the mean of pre-test knowledge scores (4.26 ± 1.06) at 0.05 level of significance (t=12.702, p<0.05).Mean of post-test knowledge scores in the area 'The resuscitation process' (22.04 ± 1.88) is significantly higher than the mean of pre-test knowledge scores (15.22 ± 2.09) at 0.05 level of significance (t=16.4807, p<0.05).

TABLE -1: Percentage wise distribution of GNM Final year students according to levels of Knowledge.

N=50

Level of knowledge	Range of scores	Number of respondents	Percentage (%)
Very poor	0-7	0	0.0
Poor	8-14	0	0.0
Average	15-21	18	36%
Good	22-28	31	62%
Very good	29-36	1	2%
Total		50	100%

TABLE-2: Association between post-test knowledge scores and selected Socio Demographic Variables.

Sl. No	Socio-demographic variables	Df	Chi-square value	Table value	Level of significance
1	Age	1	1	1.96	P>0.05 NS
2	Gender	1	0.38	1.96	P>0.05 NS
3	Religion	1	0.36	1.96	P>0.05 NS
4	Type of Family	1	0.28	1.96	P>0.05 NS
5	Percentage of marks obtained in the last year	1	1	1.96	P>0.05 NS
6	Family income per month(in rupees)	1	0.24	1.96	P>0.05 NS
7	Has attended any education program on PALS	1	1	1.96	P>0.05 NS

V. RECOMMENDATIONS

Pedaiatric nurses need to be equipped with new knowledge and technical skills regarding critical assessment of children during emergencies. Special training should be given regarding Pediatric basic and advanced life support for nurses working NICU and PICU.

VI. CONCLUSION

Pediatric advance life support intended to setup new guidelines for early identification of respiratory failure, shock and sudden cardiac arrest and it emphasize interventions to reduce risk of sudden death among children. Effective management of life threatening illness among infants and children requires high knowledge of technological skills and updated medical knowledge to handle critical situations.

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